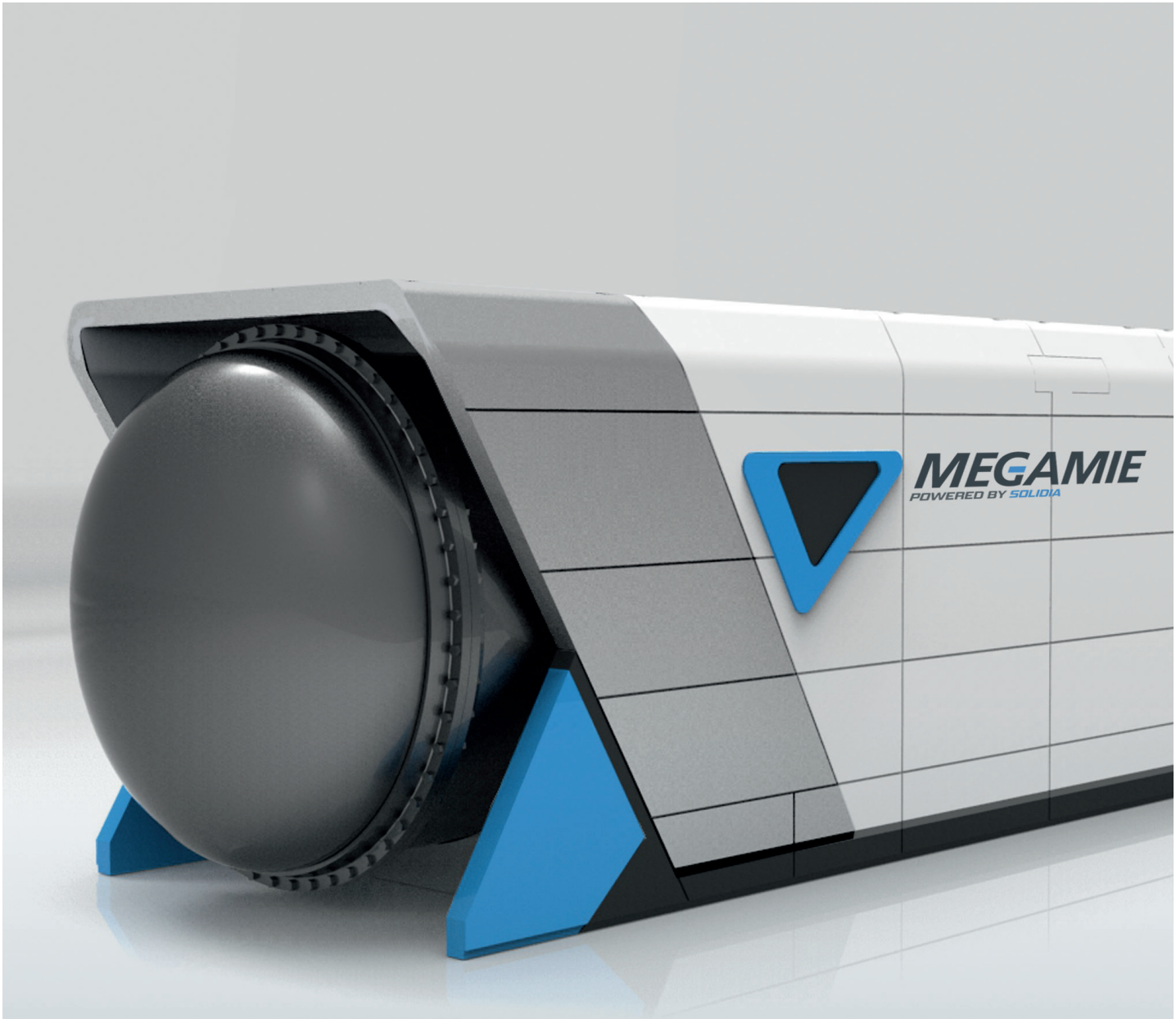
MITSUBISHI POWER



MEGAMIE

FUEL CELL MEETS MICRO GAS TURBINE

- 250 kW-class
  Solid Oxide Fuel Cell +
  Micro Gas turbine hybrid system
- Electrical efficiency 55 %
- Co-generation
  efficiency up to 73 %

Mitsubishi Power is a power solutions brand
of Mitsubishi Heavy Industries.

Mitsubishi Power Europe GmbH

MOVE THE WORLD FORWARD MITSUBISHI HEAVY INDUSTRIES GROUP

MITSUBISHI POWER

FUEL CELLS FOR DECENTRALIZED APPLICATION

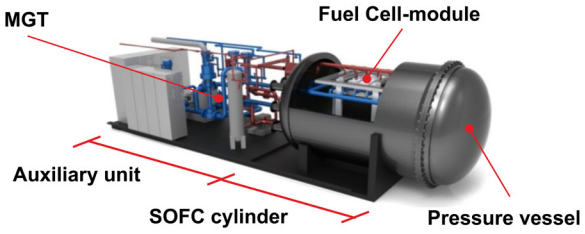
The hybrid system convinces with flexible use of various types of gas as fuel

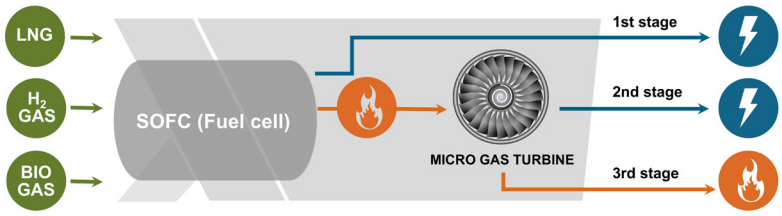
Specs and benefits:

- Six 250 kW demonstrators successfully tested
- 250 kW unit under construction (commercial)
- 1 MW plant in test operation
- Electrical efficiency 55 %
- Co-generation efficiency up to 73 %
- No advanced infrastructure necessary
- Broad range of applicable fuels (LNG, LPG, Bio-gas, H_2)
- Low Noise / Low Vibration / Low Emission

The Mitsubishi Power SOFC Hybrid System converts a wide range of applicable fuels into heat and power with unique tubular Solid Oxide Fuel Cells (SOFC) stacks designed by Mitsubishi Power. The system generates electricity in two stages: In the initial stage, the SOFC module produces electricity via an electro-chemical reaction. The applied fuel cell type is known for the highest efficiency on the market due to its ability to operate at high temperatures of about 900 °C. To enable even higher fuel utilization, the next stage introduces a micro gas turbine to generate electricity from the exhaust gases of the SOFC module. Used in a cogeneration system, the remaining exhaust heat can be recovered as steam or hot water, significantly increasing the combined efficiency.

Compared to conventional power generation systems, the application of the Mitsubishi Power Hybrid System reduces CO_2 emissions by nearly half, contributing to the realization of a low-carbon society.





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